

CLADOCERAN FAUNA OF MALDA DISTRICT, WEST BENGAL¹

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The paper deals with Cladocera from six ecological niches in Malda district of West Bengal. This study yielded 15 species of Cladocera from the district. It is the first systematic documentation of Cladocera from this district.

INTRODUCTION

The contributions of Gurney (1906, 1907), Brehm (1950, 1953), Sharma (1978), Chandrasekhar (1998) Chatterjee and Chandrasekhar (1999), Venkataraman and Das (1993); Venkataraman *et al.* (2000) reported on cladoceran fauna from West Bengal. The present paper describes material collected from different ecological niches in Malda district, West Bengal. Although the present record of cladoceran fauna of West Bengal is 41 species, no literature on Malda district is available. As a result of this study, 15 species of Cladocera referable to 11 genera from 4 families are recorded. This is the first authentic document on this group from the district.

Malda district (25° 03' N and 88° 09' E) is the gateway to northern West Bengal and three major rivers, Ganga, Mahananda and Tangan, pass through the district. It is a low-lying area, prone to frequent floods. Mango and rice cultivation, sericulture and pisciculture are the three major economic activities of the district.

MATERIAL AND METHODS

Material was collected by the second author from a number of water bodies by towing

plankton net (No. 25) in its sublittoral regions. The catch received in a plastic bottle at the end of a net was transferred to plastic containers and preserved in 4% formal. The material was identified with the help of keys in Michael and Sharma (1988), and Battish (1992). Ocular micrometre were used to take measurements.

The list of localities with the period of collection is given in Table 1. Specimens have been deposited in the Freshwater Biological Station, Zoological Survey of India, Hyderabad.

SYSTEMATIC ACCOUNT

Phylum: Arthropoda

Class: Crustacea

Sub class: Branchiopoda

Order: Cladocera

Family: Daphniidae

Scapholebris kingi Sars, 1903

Material examined: Female; length 0.58 mm, width 0.37 mm; MRDM.

Description: Carapace more or less quadrate, head depressed, rectangular, with posteroventral corner produced into a spine; posteroventral margin of valves almost straight, ventral margin ciliated; anterior region of head almost rounded, ventral margin concave; large eye, short and blunt rostrum; small antennules; post abdomen short and broad, rounded at posterior end with 5-6 anal spine.

Distribution: INDIA: Assam, Bihar, Kashmir, Nilgiri hills, Rajasthan, Meghalaya, Tamil Nadu and West Bengal. EXTRALIMITAL: Africa, Australia, North America, Sri Lanka, Germany, China, Thailand, Indonesia.

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Table 1: Sampling site and period of collection of Cladocera from Malda district of West Bengal

Sl. No.	Localities	Abbreviation used	Period of collection
1.	Mahananda river at Aiho village near Jadavnagar	MRAV	June, 1998
2.	Mahananda river and its associated ditches near Malda town bridge	MRDM	June, 1998
3.	Flood affected roadside canal at Chandipur	RSCC	October, 1999
4.	A stagnant water body under Bhavanipur bridges near Chanchal	SWBCH	October, 1999
5.	A flood affected pond at Aiho village near Namotola	PAVN	October, 1999
6.	Malakar pond at Aiho village	MPAV	October, 1999

***Simocephalus exspinosus* (Koch, 1841)**

Material examined: Female, length 1.0 mm, width 0.7 mm; MPAV.

Description: Carapace oval; dorsal margin almost straight, but forming curve before joining the posterior protuberance; posterior part of the dorsal margin distinctly denticulate, head small and triangular; eye situated at vertex. Postabdomen broad, slightly narrow apically; 10-12 anal spines; claw long with a distinct pecten.

Distribution: INDIA: Meghalaya, Karnataka and West Bengal. EXTRALIMITAL: Cosmopolitan.

Family: Moinidae

***Moina micrura* Kurz, 1874**

Material examined: Female, length 0.3 mm, width 0.18 mm; PAVN.

Description: Head large, rounded anteriorly; small spindle-shaped antennule with distal sensory hairs; eye large, valves oval shaped, reticulate with rounded posterior margin; postabdomen short, with a few thick, ciliated, anal denticles; with long and curved claw, 3-7 teeth present at ventral base of claw; concave margin of claw with fine setae.

Distribution: INDIA: West Bengal, Nilgiri hills, Bihar, Karnataka, Punjab, Haryana, Rajasthan and Tamil Nadu. EXTRALIMITAL: Africa, Syria, Russia, France, Philippines.

Family: Macrothricidae

***Echinisca triserialis* (Brady, 1886)**

Material examined: Female, length 0.6 mm, width 0.45 mm, MRAV.

Description: Body roughly oval in shape, dorsal margin slightly arched compared to

ventral margin, with serrations; antennule cylindrical and widened distally; head and eye large, postabdomen large, moderately broad, bilobed; short, curved claw.

Distribution: INDIA: West Bengal, Rajasthan Bihar, Meghalaya and Kerala. EXTRALIMITAL: Australia, Philippines, Sri Lanka, Morocco, Russia, France.

Family: Chydoridae

Subfamily: Chydorinae

***Chydorus sphaericus* (O.F. Muller, 1776)**

Material examined: Female; length 0.53 mm, width 0.48 mm; RSCC.

Description: Body spherical; valves rounded at posterodorsal and posteroventral corners, with pentagonal reticulations; rostrum pointed; postabdomen short, with 7-10 denticles; preanal corner projecting, lateral setae in several groups and arranged in single row; claw with two basal spines and setae on the concave margin.

Distribution: INDIA: West Bengal, Bihar, Kashmir, Ladakh, Nilgiri hills, Punjab and Meghalaya. EXTRALIMITAL: Cosmopolitan.

***Chydorus ventricosus* Daday, 1898**

Material examined: Female; length 0.4 mm, width 0.3 mm; MRDM.

Description: Body almost oval, posterodorsal and posteroventral corners of valves rounded, valves with polygons enclosing pigment patches and dots; long rostrum with pointed, V-shaped rostrum notch at the tip; postabdomen elongated, slightly tapering distally and distinct preanal corner with 9-10 marginal spines and 4-7

lateral group of setules; claw with long slender basal spine and setae on concave margin.

Distribution: INDIA: Nilgiri hills, Gujarat, Rajasthan, Tamil Nadu, Kerala, Maharashtra and West Bengal. EXTRALIMITAL: Sri Lanka, China, Java, East Africa.

Dunhevedia crassa crassa King, 1853.

Material examined: Female; length 0.5 mm, width 0.45 mm; MPAV.

Description: Body oval; posteroventral corner of valves with denticle; ventral margin with feathered setae, middle seta longest; postabdomen oval with 15-18 spines; claw with basal spine.

Distribution: INDIA: West Bengal, Gujarat, Rajasthan, Tamil Nadu and Kerala. EXTRALIMITAL: Holarctic region, Ethiopia, Indo-Malayan, Russia and Australian region.

Subfamily: Aloninae

Alona davidi davidi Richard, 1895

Material examined: Male; length 0.9 mm, width 0.7 mm MRDM.

Description: Body oval; valves with polygons; posterodorsal and posteroventral corners of valves rounded; antennules not reaching apex of rostrum; postabdomen narrowing distally; preanal margin slightly shorter than postanal margin; claw with one basal spine; setae present on proximal part of concave margin.

Distribution: INDIA: West Bengal. EXTRALIMITAL: Ethiopian region, Haiti.

Alona davidi punctata (Daday, 1898)

Material examined: Female; length 0.6 mm, width 0.5 mm; MRAV.

Description: Body suboval; dorsal margin of head forming smooth curve with dorsal margin of valve; ventral margin of valve projecting in middle, with feathered setae passing on the posteroventral corner into a row of short setules, which continue on posterior margin; rostrum blunt, plate of labrum rounded; postabdomen widest in

the middle, tapering distally, with 10-12 groups of lateral anal spines and groups of fine setae, claw with one basal spine and setae on concave margin.

Distribution: INDIA: West Bengal and Tamil Nadu. EXTRALIMITAL: Ethiopian and Australian region, Argentina.

Alona pulchella King, 1853

Material examined: Female; length 0.35 mm, width 0.22 mm; MRDM.

Description: Body almost quadrangular in shape; posterodorsal and posteroventral corners of valves rounded; rostrum blunt, antennules not reaching apex of rostrum; keel of labrum posteriorly curved; postabdomen with almost straight margins, lateral setae in groups, distal seta longest in each group - basal spine present on claw, setae absent on concave margin of claw.

Distribution: INDIA: Gujarat, West Bengal and Tamil Nadu. EXTRALIMITAL: Australia, Sri Lanka, Philippines, Russia.

Leydigia acanthocercoides (Fischer, 1854)

Material examined: Female; length 0.54 mm, width 0.5 mm; MRAV.

Description: Body almost oval and compressed; valves with longitudinal lines; head shield with rounded posterior margin; rostrum short, blunt, directed slightly ventrally; ocellus larger than eye; postabdomen broadly rounded and margin concave with large lateral groups with two setae in each; claw without basal spine.

Distribution: INDIA: West Bengal, Rajasthan and Gujarat. EXTRALIMITAL: Ethiopian, Indo-Malayan, Neotropical and European-Russian region.

Oxyurella singalensis (Daday, 1898)

Material examined: Male; length 0.52 mm, width 0.33 mm; MRDM.

Description: Valves with dots on ventral side, posterodorsal and posteroventral corner of valves rounded; postabdomen uniformly wide but slightly tapering distally; anal spines confined

to rounded dorsal end of postabdomen; first leg with a blunt hook; claw large with two basal spines, the large one some distance from base and the small one near the base.

Distribution: INDIA: West Bengal and Kerala. EXTRALIMITAL: Ethiopian, Indo-Malayan region, China.

Oxyurella tenuicaudis (Sars, 1862)

Material examined: Female; length 0.6 mm, width 0.44 mm; MRDM.

Description: Body oval, posteroventral corner rounded with row of spinules on inner side; rostrum blunt, directed ventrally, postabdomen narrowing distally, with 12-13 anal spines, of which distal one very large, a small spinule near claw.

Distribution: INDIA: West Bengal. EXTRALIMITAL: Holarctic region, European part of Russia.

Kurzia latissima (Kurz, 1875)

Material examined: Female; length 0.87 mm, width 0.68 mm; MRDM.

Description: Posterodorsal and posteroventral corners rounded; head and valves forming semicircular dorsal arch; rostrum long, antennules not reaching apex of rostrum; postabdomen long, narrow, slightly tapering

distally, with 12 marginal anal spines; claw with basal spine, setae present on concave margin of claw.

Distribution: INDIA: West Bengal. EXTRALIMITAL: Holarctic, Neotropical region and European part of Russia.

Euryalona orientalis (Daday, 1898)

Material examined: Female; length 0.6 mm; width 0.46 mm; SWBCH.

Description: Body quadrangular, ventral margin with blunt process, ventral middle margin of valves with setae arising at some distance from margin; valves with concentric rows of weak dots at their margins; antennule reaching apex of rostrum; postabdomen narrow, slightly curved with about 20 anal denticles; basal spine present on claw; setae present on proximal half of concave margin of claw.

Distribution: INDIA: West Bengal and Tamil Nadu. EXTRALIMITAL: Indo-Malayan, Ethiopian and Neotropical region.

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